



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,193	10/12/2004	Norbert Herfert	29827/38367A	8679
4743	7590	03/13/2008	EXAMINER	
MARSHALL, GERSTEIN & BORUN LLP 233 S. WACKER DRIVE, SUITE 6300 SEARS TOWER CHICAGO, IL 60606			SIMONE, CATHERINE A	
			ART UNIT	PAPER NUMBER
			1794	
			MAIL DATE	DELIVERY MODE
			03/13/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/511,193	HERFERT ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Catherine Simone	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 05 December 2007.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-27 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ .  | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Withdrawn Objection***

1. The objection of claim 22 of record in the previous Office Action mailed 9/10/2007, Page 2, Paragraph #1 has been withdrawn due to the Applicant's amendment filed 12/5/2007.

### ***Withdrawn Rejections***

2. The 35 U.S.C. 103(a) rejection of claims 1-16 and 18-27 over Roe in view of Beihoffer et al. of record in the previous Office Action mailed 9/10/2007, Pages 2-6, Paragraph #3 has been withdrawn due to the Applicant's amendment filed 12/5/2007.
3. The 35 U.S.C. 103(a) rejection of claim 17 over Roe in view of Beihoffer et al. and further in view of Wehrmeyer et al. of record in the previous Office Action mailed 9/10/2007, Pages 6-7, Paragraph #4 has been withdrawn due to the Applicant's amendment filed 12/5/2007.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
5. Claims 1-8, 11 and 13-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melius et al. (US 6,323,388 B1) in view of Beihoffer et al. (US 6,072,101).

Regarding claims 1, 18 and 19, Melius et al. teach an absorbent article wherein the article is a diaper (col. 3, lines 15-27) comprising a flexible absorbent sheet (Figures 2 and 3, sheet 48)

comprising a superabsorbent polymer component, as particles, (col. 9, lines 41-43 and col. 10, lines 5-25 and 47-59) wherein the superabsorbent polymer component is free of interparticle crosslinking, since the superabsorbent polymer component is in the form of discrete particles (col. 10, lines 47-50) and there is no mention of interparticle crosslinking; and a plasticizing component in an amount of about 0.1 to 200 parts by weight per 100 weight parts of the superabsorbent polymer component (col. 12, lines 25-35 and 67-68; and col. 13, lines 1-7), wherein the sheet contains about 60% to 100%, by weight, of the superabsorbent polymer component and the plasticizing component (col. 11, lines 54-67; and col. 12, lines 1-35 and 67-68; and col. 13, lines 1-7).

Melius et al. fail to specifically teach the superabsorbent polymer component (particles) comprising at least one unneutralized acidic water-absorbing resin and at least one unneutralized basic water-absorbing resin.

Beihoffer et al. teach multicomponent superabsorbent polymer particles that are useful in diapers (col. 15, lines 48-51) and include at least one unneutralized acidic water-absorbing resin and at least one unneutralized basic water-absorbing resin (col. 4, lines 15-31) for the purpose of overcoming the salt poisoning effect and demonstrate an improved ability to absorb and retain electrolyte-containing liquids, like saline, blood, urine, and menses (col. 4, lines 32-36).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the superabsorbent polymer particles in Melius et al. to include at least one unneutralized acidic water-absorbing resin and at least one unneutralized basic water-absorbing resin as suggested by Beihoffer et al. in order to overcome the salt poisoning effect and demonstrate an improved ability to absorb and retain electrolyte-containing liquids, like saline, blood, urine, and menses.

Regarding claim 2, Beihoffer et al. teach superabsorbent polymer particles comprising discrete particles of the acidic resin and discrete particles of the basic resin (col. 4, lines 40-48) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the superabsorbent polymer discrete particles in Melius et al. to include discrete particles of acidic resin and discrete particles of basic resin as suggested by Beihoffer et al. in order to overcome the salt poisoning effect and demonstrate an improved ability to absorb and retain electrolyte-containing liquids, like saline, blood, urine, and menses.

Regarding claim 3, Beihoffer et al. teach multicomponent superabsorbent polymer particles wherein each particle has at least one microdomain of the acidic resin in contact with, or in close proximity to, at least one microdomain of the basic resin (col. 5, lines 5-9 and 55-58) and it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the superabsorbent polymer particles in Melius et al. to be multicomponent superabsorbent polymer particles wherein each particle has at least one microdomain of the acidic resin in contact with, or in close proximity to, at least one microdomain of the basic resin as suggested by Beihoffer et al. in order to overcome the salt poisoning effect and demonstrate an improved ability to absorb and retain electrolyte-containing liquids, like saline, blood, urine, and menses.

Regarding claim 4, note the superabsorbent polymer particles in Melius have a particle size distribution of about 10 to about 810  $\mu\text{m}$  (col. 10, lines 56-57).

Regarding claim 5, note the superabsorbent polymer particles in Melius have a particle size distribution of about 30 to about 375  $\mu\text{m}$  (col. 10, lines 56-57).

Regarding claim 6, note the superabsorbent polymer particles in Melius have a mass median particle size of less than about 400  $\mu\text{m}$  (col. 10, lines 56-57).

Regarding claim 7, note the acidic water-absorbing resin in Beihoffer et al. is polyacrylic acid (col. 4, lines 15-17).

Regarding claim 8, note the basic water-absorbing resin in Beihoffer et al. is a poly (dialkylaminoalkyl(meth)acrylamide) (col. 4, lines 17-21).

Regarding claim 11, the limitation “internally plasticized” is deemed a method limitation and is being given little patentable weight. The method of forming the product is not germane to the issue of patentability of the product itself. MPEP 2113.

Regarding claims 13 and 14, note in Melius up to 40%, by weight in total, of one or more optional ingredients such as fibers and nonabsorbent fillers (col. 11, lines 49-54 and col. 37, lines 38-42).

Regarding claim 15, the sheet in Melius inherently has a stiffness of less than about 6 mNm, since the sheet is flexible and is being used to form a diaper or catamenial device which is similar to that of Applicant’s present invention.

Regarding claim 16, note the sheet in Melius has a density of not more than 0.6 g/cc (claim 11), which would include the claimed range of about 0.3 to about 0.9 g/cc.

Regarding claim 17, note the sheet in Melius is embossed (Figs. 7 and 8; and col. 29, lines 35-56).

Regarding claim 20, note the absorbent sheet is the core of the absorbent article (diaper) in Melius (Fig. 2, absorbent sheet 48).

Regarding claim 21, note two absorbent sheets as the core of the absorbent article (diaper) in Melius (Fig. 2, sheets 44 and 48).

Regarding claim 22, note in Melius a wicking layer (distribution or intake layer) disposed between the two sheets (col. 14, lines 34-48).

Regarding claim 23, note in Melius a top sheet in contact with a first surface of the core (Figs. 2 and 3, topsheet 28), and a backsheets in contact with a second surface of the core (Figs. 2 and 3, backsheet 30), the second core surface opposite from the first core surface.

Regarding claim 24, note in Melius an acquisition layer (Figs. 2 and 3, layer 46) disposed between the top sheet (Figs. 2 and 3, topsheet 28) and the core (Figs. 2 and 3, core 32).

Regarding claim 25, note the diaper in Melius *can* include an acquisition layer (col. 18, lines 57-58), hence the diaper in Melius could be free of an acquisition layer.

Regarding claim 26, note the sheet in Melius is free of cellulosic fibers (col. 11, lines 49-54).

Regarding claim 27, note in Melius at least one of the sheets further comprises up to 25%, by weight, of nonwoven fibers (claim 7).

6. Claims 9, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melius et al. in view of Beihoffer et al. as applied to claim 1 above, and further in view of Brueggemann et al. (US 6,051,317).

The combination of Melius et al. and Beihoffer et al. teach the presently claimed flexible absorbent sheet as shown above. However, Melius et al. fail to specifically teach the plasticizer being selected from the group of plasticizers recited in claims 9, 10 and 12. Brueggemann et al. teach sheet-like superabsorbent structures, which can be used in diapers, to include plasticizers such as 2-ethylhexanol (alcohol) and glycerol (col. 2, lines 46-49) for the purpose of providing flexibility to the sheet (col. 2, lines 44-49). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the plasticizer in Melius et al. to consist of an alcohol or glycerol, which are one of the plasticizers recited in

claims 9, 10 and 12, as suggested by Brueggemann et al. in order to provide a flexible superabsorbent sheet for the diaper.

***Response to Arguments***

7. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new grounds of rejection, which are presented above.

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (571) 272-1501. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Catherine Simone/  
Examiner, Art Unit 1794  
February 27, 2008

/KEITH D. HENDRICKS/  
Supervisory Patent Examiner, Art Unit 1794